

when, despite the species having become increasingly scarce, two much larger flocks are seen.'

[A possible explanation of the later records was suggested by K. S. Dharmakumarsinhji's note published on p. 740 of Vol. 51.—Eds.]

22. OCCURRENCE OF THE BLACKNECKED CRANE (*GRUS NIGRICOLLIS*) IN INDIAN LIMITS

While serving as Political Officer of the Subansiri Area of the NE. Frontier in 1946-48 I discovered that a flock of this species regularly winters in the Apa Tani Valley.

The Apa Tani Valley which lies in the heart of the Dafla Hills, 60 miles north of N. Lakhimpur in Assam, is a geographical freak and the tribe that inhabits it is even more remarkable. After a six days march over a tangle of mountain ranges, intersected by precipitous ravines and gorges, and covered from base to summit in dense evergreen forest—except where this has been cleared by the scattered and primitive Dafla settlements for their slash-and-burn *jhum* cultivations—one climbs a final ridge and looks down on a flat, open basin, a Manipur vale in miniature, only at an elevation of 5,000 ft. Like the latter it is obviously the dried-up bed of an old lake, and is inhabited by some 20,000 Apa Tani tribesmen who have evolved an entirely self-sufficient and highly intensive agricultural system which is quite unique. Not an inch of the valley floor is wasted. The irrigable portions are under a complicated series of rice terraces fed by the Kale river which has been canalised and diverted to water the greater part of the arable area. The *bunds* bounding the terraces and any dry and non-irrigable land are sown with millet, and the slopes and the surroundings of the seven large villages are planted with carefully tended groves of *Pinus excelsa* and a species of bamboo. These are grown for building purposes and neither are endemic in the neighbouring hills but were brought by the Apa Tanis on their original migration from some sub-Himalayan source.

The Blacknecked Cranes are a well-known and conspicuous feature of the avifauna. According to the tribesmen a flock varying 20 to 40 have visited the valley every winter within human memory.

The first year I was there they arrived in mid-November. There were 27, and they appeared quite suddenly one night. Their habits were very regular. During the day they fed out in the open fallow fields on fallen grain, usually in one flock but sometimes broken up into two or three parties. They took little notice of the Apa Tanis working in the fields who did not molest them, but were very suspicious of anyone not in tribal dress, and it was impossible to get within gunshot. In the evenings they flighted to one of the patches of swampy land which lay on the outskirts of the valley and spent the night there. They seldom took wing unless disturbed or when changing ground, and when they did so would fly low with alternate flapping and long glides. They never left the confines of the valley. After much stalking I shot a male and confirmed the identity. At the end of February, they began to get restless. The flock would be feeding quietly, when suddenly they would all burst into a chorus of